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NEW BOPYRID ISOPOD CRUSTACEANS FROM DRY TORTUGAS FLORIDA

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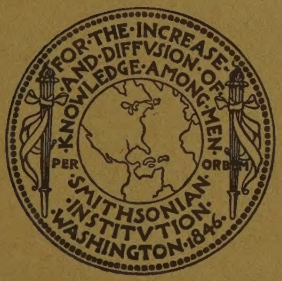
No. 2924.—From the Proceedings of the United States National Museum
Vol. 81, Art. 1, pp. 1–6



SMITHSONIAN INSTITUTION
UNITED STATES NATIONAL MUSEUM
WASHINGTON, D. C.
1932

NEW BOPYRID ISOPOD CRUSTACEANS FROM DRY TORTUGAS, FLORIDA

By A. S. Pearse

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During the summer of 1931 two new species of bopyrids and an undescribed male of one of Harriet Richardson's species were found at Dry Tortugas, Fla. These are herewith described.

BOPYRO, new genus

Description.—Bopyridae: In the female the first four segments of the abdomen are distinct and the last two partly fused. There are no uropods and only four pairs of pleopods, which are more or less cylindrical. The distal segment of the first lamella of the marsupium is produced into a blunt, conical lobe.

In the male the first three segments of the abdomen are distinct, and the last three are fused into a trilobate terminal piece. There are no uropods, and pleopods are absent or rudimentary.

The genus differs from *Probopyrus* in having free abdominal segments in the male and fused abdominal segments in the female; from *Bopyriscus* in having uniramous pleopods in the female; and from *Bopyrina* in having distinct abdominal segments in the male.

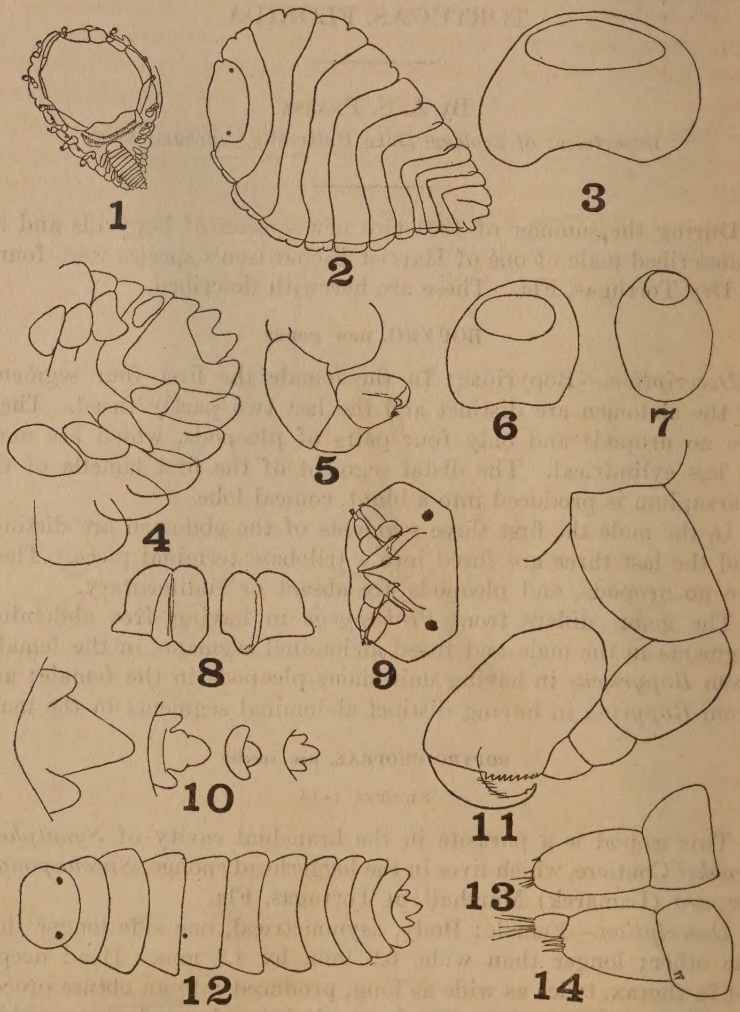
BOPYRO CHOPRAE, new species

FIGURES 1–14

This isopod is a parasite in the branchial cavity of *Synalpheus brooksi* Coutiere, which lives in the loggerhead sponge, *Speciospongia vespara* (Lamarck) Marshall, at Tortugas, Fla.

Description.—Female: Body, asymmetrical, one side longer than the other; longer than wide, 6.2 mm. by 4.3 mm. Head deeply set in thorax, twice as wide as long, produced into an obtuse process at the anterior angle, with front slightly elevated near middle. Eyes placed near the lateral margins of the head, small, irregular. First antennae small, 3-segmented. Second antennae shorter than first, 2-segmented. The seven thoracic segments are distinct. The lateral margins of first four are bilobate. All bear lamellar epimeral plates along one margin. Seven pairs of subchelate peraeo-

pods are present. Ovarian bosses make the plates above the brood pouch reticulate. The first four segments of the abdomen are distinct; the last two are not completely separated. There are no

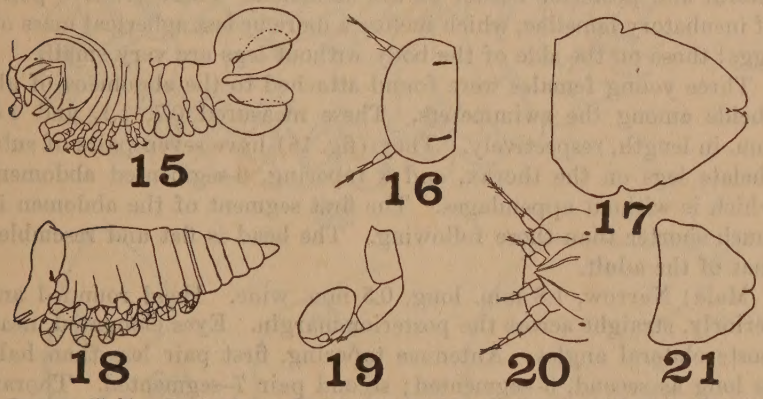


FIGURES 1–14.—*Bopyro choprae*, new species: 1, Male and female; 2, female, dorsal view; 3, first pleopod, female; 4, abdomen of female, ventral view; 5, seventh peraeopod, female; 6, 7, third and fourth pleopods, female; 8, first incubatory lamellae, female; 9, ventral view of head, male; 10, posterior ends of abdomen, male; 11, first peraeopod, male; 12, body of male, dorsal view; 13, second antenna, male; 14, first antenna, male

uropoda. Four pairs of more or less cylindrical pleopods are present; those of the first two are slightly bilobed at the tip; those of the two posterior pairs are cylindrical and rounded distally. The five

pairs of incubatory lamellae do not completely inclose the brood pouch. The first pair are produced into a blunt lobe distally. The posterior pair are setose along their distal margins.

Male: Length of body, 1.2 mm.; width, 0.4 mm.; slightly concave at the middle. First antennae 3-segmented, second antennae 2-segmented. Eyes near posterolateral angles, rounded. There are seven distinct thoracic metameres and seven pairs of subchelate peraeopods. The first three segments of the abdomen are distinct; the last three are fused into a tail piece, which bears three rounded, distal lobes, the median one of which is much larger and projects much beyond the others. Epimeral plates are larger on the right than on the left later margins. There are no uropoda, and pleopods



FIGURES 15–21.—*Hemiarthrus schmitti,* new species: 15, Female, without incubatory pouch; 16, head of male, dorsal view; 17, male abdomen; 18, young female; 19, first leg, male; 20, head of male, ventral view; 21, male abdomen

are represented only by two pairs of tubercles on the first two abdominal segments.

The species is named for Dr. B. C. Chopra, of the Indian Museum.

Type.—U.S.N.M. No. 64488.

Genus HEMIARTHRUS Giard and Bonnier

HEMIARTHRUS SCHMITTI, new species

FIGURES 15–21

This isopod is a parasite on the ventral side of the abdomen of *Synalpheus brooksi* Coutiere at Tortugas, Fla. The host lives in the loggerhead sponge, *Speciospongia vespara* (Lamarck) Marshall.

Description.—Female: Body asymmetrical, greatly swollen on one side by outgrowth of marsupial pouch; length of largest specimen, 4.6 mm.; width, 2.5 mm. Head flat, somewhat wider than long, deeply sunk into thorax; anterior margin nearly straight; a blunt lobe at the anterolateral angle on the side opposite the marsupial pouch.

Antennae digitiform. Eyes somewhat elongated, near lateral margins of head, nearer anterior than posterior margin. A forked chitinous thickening branches above the mouth and bifurcates on each cheek. Seven thoracic segments and seven legs are apparent on the side of the body opposite the marsupium; the other side bears only the first leg, and the somites are not defined. The thoracic legs are all subchelate. Ovarian bosses are present on the marsupial side of the thorax. The abdomen is composed of four segments. On the side away from the marsupium the first three segments each bear an appendage, which ends in two flat, spatulate rami; the last somite bears two such appendages; in other words, there is a fringe of five flattened, biramous appendages along the lateral and posterior border of the abdomen. There are five pairs of incubatory lamellae, which inclose a more or less spherical mass of eggs; those on the side of the body without legs are very small.

Three young females were found attached to the abdomens of alpheids among the swimmerets. These measured 0.7, 1.1, and 1.3 mm. in length, respectively. They (fig. 18) have seven pairs of subchelate legs on the thorax, and a tapering, 6-segmented abdomen, which is without appendages. The first segment of the abdomen is much shorter than those following. The head is flat and resembles that of the adult.

Male: Narrow, 1.8 mm. long, 0.5 mm. wide. Head rounded anteriorly, straight across the posterior margin. Eyes elongated, near posterolateral angles. Antennae tapering, first pair less than half as long as second, 3-segmented; second pair 7-segmented. Thorax 7-segmented, with seven pairs of subchelate appendages. Abdomen unsegmented, without appendages; lateral margins somewhat variable, often with a deep notch near the base and another slight indentation nearer the tip; posterior end, always rounded and emarginate.

The species is named for Dr. Waldo Schmitt, curator of marine invertebrates, United States National Museum.

Type.—U.S.N.M. No. 65147.

Genus STEGIAS Richardson

STEGIAS CLIBANARII Richardson

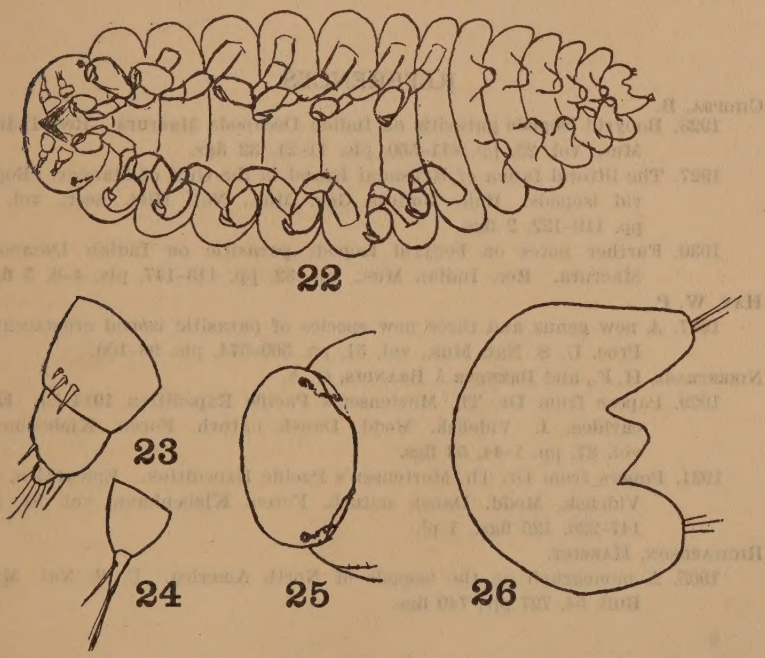
FIGURES 22–26

Stegias clibanarii RICHARDSON, Proc. U. S. Nat Mus., vol. 27, pp. 59–60, 1904.

Through the kindness of Prof. B. W. Kunkel, three specimens of this species, all now in the United States National Museum, were obtained from the branchial cavity of *Clibanarius tricolor* (Gibbes). The two females differ in some respects from Richardson's description, which was made from one very old specimen, but the abdomens and their appendages agree quite well with her descrip-

tion. The females measure 2.5 and 3.1 mm. long and 1.2 and 1.7 mm. wide. They are more asymmetrical than Richardson's figures show, and their bodies are bent somewhat more to one side; the fourth and fifth pairs of legs are not widely separated. As Richardson had no male specimens, the following description of the male is given:

Body 0.9 mm. long, 0.2 mm. wide, straight except for the abdomen, which is bent slightly toward the left side; consists of a head and 13 free segments. Head rounded along lateral and anterior margins, wider than long, inclosed for a third of its length in the first thoracic segment. Eyes near posterolateral margins of the head, small;



FIGURES 22–26.—*Stegias clibanarii* Richardson, male: 22, Ventral view; 23, first antenna; 24, second antenna; 25, head, dorsal view; 26, tip of abdomen, ventral view

there are circular spots continuous posteriorly with pigmented sinuous bands, which reach to the posterior margin of the head. First antennae 3–segmented, second antennae 2–segmented. Thorax composed of seven free segments, each of which bears a pair of subchelate pereiopods; first pair of pereiopods smaller than the remaining pairs. Abdomen 6–segmented; first five segments each bear a pair of conical ventral appendages. Sixth segment terminating in two lateral and a smaller median conical process; asymmetrical, the right process being longer than the left.

Types.—Female, in the Peabody Museum, Yale University; male, U.S.N.M. No. 65146.

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U. S. GOVERNMENT PRINTING OFFICE: 1932